#### **APPENDIX**L

#### **Samples of Printed Materials and Price Quotations**

This appendix contains the related information regarding the price quotations and samples of printing options for a Jeppesen Airway Manual insert and an airport noise information booklet. Following is the list of information included in this appendix.

- Sales proposal and sample of Scottsdale Airport
- Sales proposal and sample of Ft. Lauderdale Executive Airport
- Sales proposal and sample of Miami International Airport
- Sales proposal and sample of Orlando International Airport



2442 Mississippi Avenue Tampa, FL 33629 Phone (813) 251-2401 Fax (813) 251-0831

#### **SALES PROPOSAL**

URS Corporation Attn: Roger Carvey Email: roger_carvey@urscorp.com		com	Date: Estimate: # Phone:	3-9-05 <b>260423</b> 675-6567
	Captain's Flig	ht Insert #1		
Size:	8.5 x 11 folds to	9 8.5 x 5.5.		
Ink Colors:	4cp/4cp. Bleeds.			
Paper:	80# Gloss Cover.  Note: Change in paper selection after stock has been shipped from supplier to printer may be subject to 25% restocking fee plus any applicable freight charges.			
Preparation:	URS to provide electronic file ready for output. Hillsboro to image digital dylux and Epson hi-res digitital color proof for customer approval prior to printing.			
Finishing:	Print, trim, score, drill 7 holes and fold to size.			
Packaging:	Carton pack conveniently.			
Shipping:	FOB Tampa. (includes local delivery)			
Schedule:	To be determined			
Quantity:	<u>1,000</u>	2,000		
Price:	\$765	\$845		
from that which ha	d been originally de rences. <b>Expiration</b> :	riginal copy or manuscript, should it be scribed and quoted, the original quotatic This agreement shall become null and ons and schedules stated above.By: <b>Stev</b>	on shall be amended woid if not accepted	to reflect the pricing within 30 days.
This Purchase Ordo Conditions on reve	-	ordance with specifications and schedul	es stated above and	subject to Terms and
Purchaser			Date	



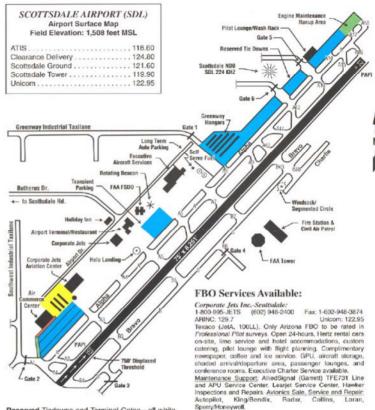
Scottsdale Airport • 15000 North Airport Drive, Scottsdale, Arizona 85260 (602) 994-2321 • Itax (602) 483-6794 • www.ci.scottsdala.az.us/airport

#### REQUIRED NOISE ABATEMENT PROCEDURES

- No intersection take offs, stop-and-go, formation, simulated single engine departures or go arounds on Runways 3 and 21.
- No touch-and-go operations between 9:30 p.m. and 6:00 a.m.
- No engine maintenance runups between 10:00 p.m. and 7:00 a.m., except in emergencies.
- Maintenance runups are to be conducted only in the designated engine runup area at the north end of Kilo Ramp (next to the north end of the runway).
- Kunway weight restriction is 75,000 lbs. maximum certificated takeoff weight.

#### RECOMMENDED NOISE ABATEMENT PROCEDURES

- Kunway 3 is the designated calm wind runway
- Make right turn to 300 degrees as soon as possible when departing Runway 21, consistent with safety.
- Climb as high as possible before leaving airport boundaries, consistent with safety.
- Request that all aircraft not meeting F.A.R. Part 36, Stage III requirements take off on Runway 3 and land on Runway 21, weather and traffic permitting, consistent with safety.
- Please fly high and tight patterns, no low approaches, follow the PAPI consistent with safety.
- Left hand traffic pattern on Runway 3, right hand pattern on Runway 21.
- On Runway 21, aircraft are requested to make short final approaches avoiding direct overflight of residential areas.
- Jets are requested to use N.B.A.A. Standard Noise Abatement Departure procedures or comparable procedure of aircraft manufacturer.
- ➤ Propeller aircraft are requested to use A.O.P.A. "Noise Awareness Steps."
- Compliance with recommended noise abatement procedures are at the pilot's discretion. SAFETY ALWAYS COMES FIRST.
  - \* CONTACT SCOTTSDALE AIRPORT AT (602) 994-2321 FOR FURTHER INFORMATION.



Reserved Tiedowns and Terminal Gates - all white tiedowns and parking spaces are reserved. No transient parking. Yellow tiedowns for transient aircraft.

Helicopter Landing Area

Caution! Restricted to Aircraft with wingspan of 36 ft. or less.

Caution! Restricted to Aircraft with wingspan of 38 ft. or less.

Caution! Restricted to Aircraft with wingspan of 50 ft. or less.

Caution! Restricted to Aircraft with wingspan of 55 ft, or less.

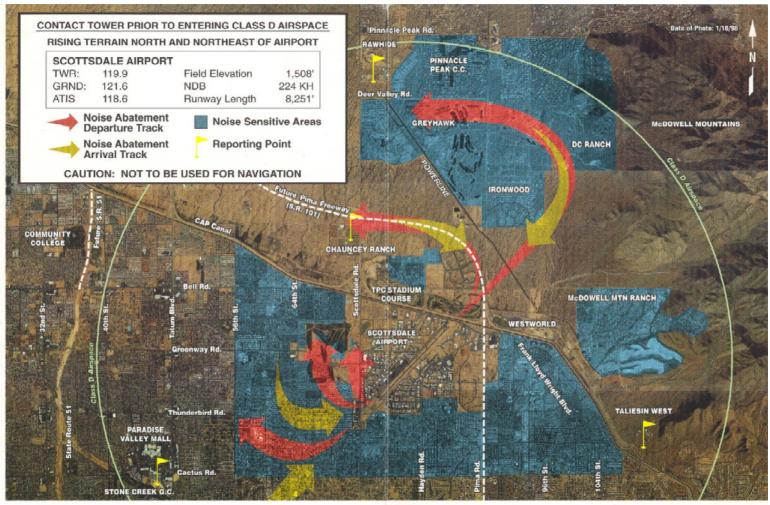
Map not to scale.

#### EAS, Executive Aircraft Services-Scottsdale:

(602) 991-0900 Fax: 1-602-991-3067 Unicom: 122.95

Large, comfortable passenger founge with conference area, lime service, hotel accommodations, custom catering and complimentary coffee & kee services, GPU, Jet A and 100 LL bel with hanger and sheded aircraft storage nightly or monthly. Maintenance: FAA Certified Repair Station, Turbine Service Center for - Strike Aerospace (Hawker), Beechcartt (King Air), BouchjoftMisbushi (MU-300, 400 Series), Cessna (All Series), Fairchild Swearingen, Israeli Aircraft Industries (Westwind), Lear (20, 30 & 55 Series). Missubshi (MU-2), Piper Cheyenne, Raytheon, Sabreliner and all piston singles and twins. Complete Avionics sales, service and repair capabilities, parts support with Inventory Locator Service (ILS) for quick turnaround service. Aircraft Sales, Executive Charter Service, Consulting, Management and Fractional Ownership opportunities ask available.

#### Restaurants:



#### A.O.P.A. NOISE AWARENESS STEPS

- If practical, avoid noise-sensitive areas. Make every effort to fly at or above 2,000 feet over such areas when overflight cannot be avoided.
- Consider using a reduced power setting if flight must be low because of cloud cover or overlying controlled airspace or when approaching the airport of destination. Propellers generate more noise than engines; flying with the lowest practical RPM setting will reduce aircraft noise substantially.
- 3. Perform stalls, spins, and other practice maneuvers over uninhabited terrain.
- 4. Familiarize yourself and comply with airport noise abatement procedures.
- On takeoff, gain altitude as quickly as possible without compromising safety. Begin takeoffs at the start of a runway, not at an intersection.
- 6. Use PAPI. This will indicate a safe glidepath and allow a smooth, quiet descent to the runway.

- 7. Retract the landing gear either as soon as a landing straight ahead on the runway can no longer be accomplished or as soon as the aircraft achieves a positive rate of climb. If practical, maintain best-angle-of-climb airspeed until reaching 50 feet or an altitude that provides clearance from terrain or obstacles. Then accelerate to best-rate-of-climb airspeed. If consistent with safety, make the first power reduction at 500 feet.
- Fly a tight landing pattern to keep noise as close to the airport as possible. Practice descent to the runway at low power settings and with as few power changes as possible.
- If possible, do not adjust the propeller control for flat pitch on the downwind leg; instead, wait until short final. This practice not only provides a quieter approach, but also reduces stress on the engine and propeller governor.
- 10. Avoid low-level, high-power approaches, which not only create high noise impacts, but also limit options in the event of engine failure.
- 11. Flying between 11 p.m. and 7 a.m. should be avoided whenever possible.
  - Note: These are general recommendations; some may not be advisable for every aircraft in every situation.

    No noise reduction procedure should be allowed to compromise flight safety.



2442 Mississippi Avenue Tampa, FL 33629 Phone (813) 251-2401 Fax (813) 251-0831

#### **SALES PROPOSAL**

URS Corporation Attn: Roger Carvey Email: roger_carvey@urscorp.com		com	Date: Estimate: # Phone:	3-9-05 <b>260423</b> 675-6567
	Captain's Flig	ht Insert #2 - Noise		
Size:	8.625 x 5.875 f	lat.		
Ink Colors:	4cp/4cp. Bleeds.			
Paper:	80# Gloss Cover.  Note: Change in paper selection after stock has been shipped from supplier to printer may be subject to 25% restocking fee plus any applicable freight charges.			
Preparation:	URS to provide electronic file ready for output. Hillsboro to image digital dylux and Epson hi-res digitital color proof for customer approval prior to printing.			
Finishing:	Print, trim, score, drill 7 holes and die-cut 1 tab.			
Packaging:	Carton pack conveniently.			
Shipping:	FOB Tampa. (includes local delivery)			
Schedule:	To be determined			
Quantity:	1,000	2,000		
Price:	\$865	\$945		
from that which ha effect of such diffe Entered in accorda	d been originally de rences. <b>Expiration</b> : nce with specification	riginal copy or manuscript, should it be scribed and quoted, the original quotatic This agreement shall become null and vons and schedules stated above.By: <b>Stev</b>	on shall be amended woid if not accepted we Eckstein, Sales R	to reflect the pricing within 30 days. epresentative
Conditions on reve	_	ordance with specifications and schedul	ies stated above and	subject to Terms and
Purchaser:			Date	:

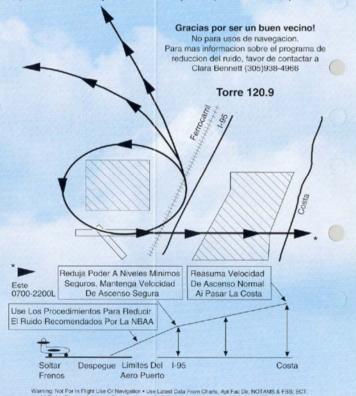
#### PROCEDIMIENTO PARA LA REDUCCION DEL RUIDO

Salida Quiet One - Solicitud Es Requirida - (2200 - 0700L)

Aplicable a salidas por la pista 8 con destinos al este y sur. Pida una vuelta a 090° de 360° a la izquierda con ascenso a altitud assignada. Mantenga curso al este hasta la autopista I-95 y commienze una vuelta de velocidad normal para mantenerse dentro de 5 millas nauticas de FXE y norte de la pista 8 hasta el encabezamiento assignado.

Mantenga una velocidad de ascenso segura y evite altitudes bajas y ruidosas sobre areas residenciales. No exceda 200 nudos hasta al este de la costa.

Destinos norte y este; Comience viraje a la izquierda sobre la autopista I-95.



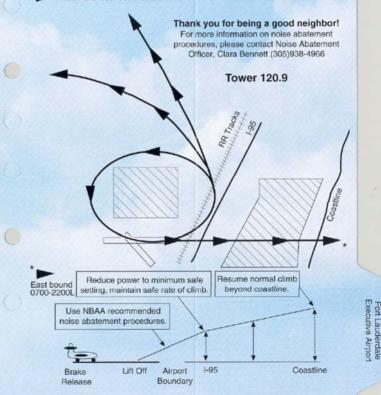
NOISE ABATEMENT PROCEDURES

Quiet One Departure - Pilot Request Required - (2200 - 0700L)

Applicable to east and southbound runway 8 departures. Request climbing left 360° turn to 090°. Maintain runway heading to I-95 then commence a standard rate turn so as to remain within 5 naulical miles of FXE and north of runway 8 centerline until on assigned heading.

Maintain safe rate of climb until reaching altitude to avoid low altitudes and high power settings over residential areas. Do not exceed 200 knots until east of shoreline, (see grids)

North and west destinations commence left turn to 330° abeam I-95.



Fort Lauderdale Executive Airport

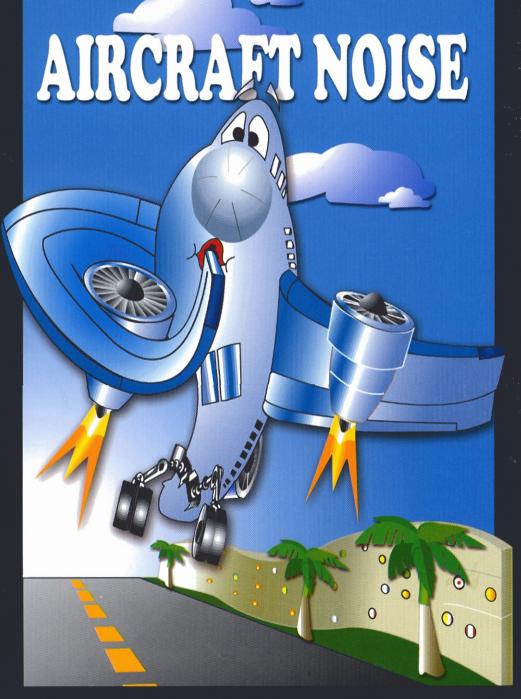


2442 Mississippi Avenue Tampa, FL 33629 Phone (813) 251-2401 Fax (813) 251-0831

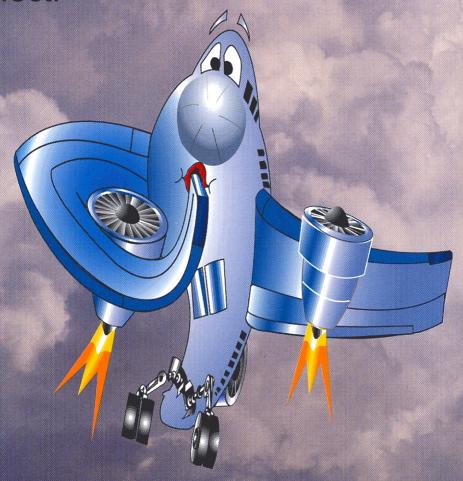
#### SALES PROPOSAL

URS Corporation Attn: Roger Carvey Email: roger_carvey@urscorp.com		com	Date: Estimate: # Phone:	3-9-05 <b>630428</b> 675-6567
	Captain's Flig	ht Insert #3		
Size:	9.5 x 30 folds to	9.5 x 6.		
Ink Colors:	4cp/4cp. Bleeds.			
Paper:	80# Gloss Cover.  Note: Change in paper selection after stock has been shipped from supplier to printer may be subject to 25% restocking fee plus any applicable freight charges.			
Preparation:	URS to provide electronic file ready for output. Hillsboro to image digital dylux and Epson hi-res digitial color proof for customer approval prior to printing.			
Finishing:	Print, trim, score, and roll-fold to size.			
Packaging:	Carton pack conveniently.			
Shipping:	FOB Tampa. (includes local delivery)			
Schedule:	To be determined			
Quantity:	<u>1,000</u>	2,000		
Price:	\$1,495	\$1,697		
from that which ha effect of such diffe Entered in accorda	d been originally de rences. <b>Expiration</b> : nce with specification er is accepted in acc	riginal copy or manuscript, should it be scribed and quoted, the original quotation. This agreement shall become null and sons and schedules stated above. By: <b>Stev</b> ordance with specifications and schedules.	on shall be amended woid if not accepted e Eckstein, Sales Ro	to reflect the pricing within 30 days. epresentative
Purchaser:			Date:	:

PLANE FACTS ABOUT



A liami International Airport is Committed to being a good neighbor to the communities which surround it. The Miami-Dade Aviation Department wants you to know the facts about its innovative aircraft noise reduction efforts that are currently in effect.



iami-Dade Aviation Department (MDAD) is taking a proactive approach in addressing community concerns about aircraft noise. As a result, a Noise Abatement Office has been created and operates under the Department's Airside Operations Division. The office's purpose is to work with the Federal Aviation Administration (FAA) airport users, civic organizations and surrounding municipalities and to develop strategies for the reduction of noise impacts associated with aircraft operations at Miami International Airport (MIA) and all General Aviation Airports operated by MDAD.

With service to more than 200 cities worldwide, Miami International continues to be one of the busiest passenger and freight airports in the United States. The airport handles an average of more than 1400 arrivals and departures per day and serves some 34 million passengers annually. In addition to MIA, the Aviation Department also operates six General Aviation Airports: Opa-Locka, Opa-Locka West, Kendall-Tamiami Executive Airport, Homestead General, Homestead Regional and the Dade-Collier Training and Transition Airport. Located in close proximity to Miami-Dade County's business centers, these airports serve both corporate and recreational aviation interests.

MDAD recognizes that the role of Miami International and General Aviation Airports is critical to Miami-Dade County's economy, but also realizes that associated aircraft noise can be disturbing and unpleasant. The Aviation Department is continually challenged to reduce and alleviate aircraft noise, where possible, from both operations on the ground and in the air.

MDAD is committed to being a good neighbor to its surrounding communities. The Department understands the need to be compatible with our neighbors, and the need to continue to work together on aircraft noise related issues. The answers are not simple to the challenge of reducing aircraft noise within residential areas, but MDAD wants you to know the facts about innovative noise reduction plans and procedures that are currently in effect and proposed for the Miami-Dade system of airports.

# THE FEDERAL AVIATION ADMINISTRATION, MDAD & NOISE CONTROL



The Federal Aviation Administration is responsible for the safe and efficient movement of aircraft into and out of an airport. Occasionally, existing arrival and departure procedures need to be modified, eliminated or replaced due to their noise impact on a community. The responsibility to bring this problem to the attention of the

FAA and to demonstrate that the proposed solution will not adversely impact another area rests with MDAD. If the procedure changes submitted to the FAA by MDAD are approved, it is the responsibility of the FAA to implement and enforce the new procedures. Cooperation, and a good working relationship, between the FAA and MDAD on noise abatement issues at Miami International and all General Aviation Airports, is essential to reducing off-airport noise impacts.

# MDAD'S COMPREHENSIVE NOISE PROGRAM



The primary goal of the MDAD Noise Abatement Office is to establish programs and procedures aimed at reducing or alleviating aircraft noise within residential areas. The Aviation Department reduces noise by

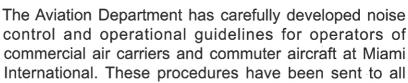
developing, in conjunction with the FAA, operational policies and procedures designed to decrease noise impacts from approaching and departing aircraft. In partnership with the Board of County Commissioners, MDAD develops compatible land use plans for areas adjacent to all County operated airports. Additionally, in cooperation with Federal laws such as the Airport Noise and Capacity Act, MDAD works with airlines to encourage the use of new technology, such as the use of engine hush-kits and new generation Stage III aircraft, which are designed to lessen the impact of aircraft noise on neighboring communities.

By working closely with communities, MDAD has identified problems and is working with communities to resolve aircraft noise related problems. However, it is important to realize that in many cases changes can't be made overnight by MDAD or the Board of County Commissioners and that the final determination on most operational requests are made by the FAA.





# NOISE ABATEMENT PROCEDURES AT MIA



operators along with a request from MDAD to comply with procedures and to "Fly Neighborly".

#### Air Carrier (Jet) Departure Procedures

MDAD is constantly evaluating new arrival and departure procedures at MIA. The purpose of these exercises is to try to lessen the noise exposure on residential areas of Miami-Dade County. In the past, MDAD has had several procedural changes approved by the FAA and many more are under consideration.

#### **Commuter Departure Procedures**

As with the Air Carrier (Jet) Departure Procedures, the Commuter Departure Procedures were developed specifically for users of Miami International. These procedures were designed to move aircraft quickly off the runways to minimize delay and to direct aircraft over points which minimize the overflight of residential areas.

#### **Charted Visual Approach Procedures**

MDAD has FAA approval to have operators fly Charted Visual Approaches under westflow conditions for all runways. This procedure requires commercial aircraft to normally fly higher over communities east of MIA on approach to landing.

#### Run-Up Procedures



MDAD also maintains restrictions on engine maintenance run-up procedures at MIA. The Aviation Department currently maintains an area on the airfield where run-ups are permitted. Located at this area is a midfield blast fence using state-of-the-art sound-suppressant materials which are designed to

significantly decrease noise created by engine maintenance run-ups. Operations at this area are determined by time-of-day (normally run-ups are permitted during daylight hours only, unless permission is otherwise granted by the Aviation Department). MDAD's Airside Operations Division is charged with enforcing the run-up procedures. Violation of these procedures are dealt with according to the severity of the violation.

#### Runway Use Program

The FAA, in conjunction with MDAD, assigns preferential use to MIA's three runways. The purpose is to minimize noise impacts associated with arrivals and departures on residential areas as much as possible. By the Year 2002, Miami International will have a fourth runway to help alleviate the operational impact of aircraft traffic during peak hours on the current three runways. This runway, to be located just north of runway 9L/27R, will be mainly used for aircraft arrivals and will not increase the noise levels to the surrounding communities.



# NOISE MONITORING AND FLIGHT TRACKING PROGRAM

Miami-Dade Aviation Department has acquired the latest in technology to determine noise impacts on residential areas and to determine the aircraft that created the noise impact. The System is called ANOMS(tm) or the Aircraft Noise and Operations Monitoring System. The System gathers and processes flight related data accurately and reliably, showing flight paths and aircraft altitudes. The System also has





the capability to be expanded to include our General Aviation Airports if needed.

Included with this system are 20 Remote Monitoring Stations (RMS), which are microphones that are permanently being installed within the communities that surround Miami International. The information gathered by these microphones is transmitted via telephone lines back to a central computer located at MIA. This information can then be used to determine adherence to arrival/departure procedures and to determine noise impact on communities due to aircraft operations.

# COMMUNITY AWARENESS & PARTNER PROGRAMS

#### **Community Outreach Program**



As part of MDAD's noise abatement program, the Aviation Department has developed a Community Outreach Program to establish and maintain communication with the community about their concerns over aircraft noise issues and to explain the Department's current efforts and future plans to control

aircraft related noise. The purpose of this program is to encourage the active participation of the public, local community groups and involved government agencies in discussion about MDAD's efforts to reduce airport related noise. The program is designed to provide a variety of methods to address the diverse interest and concerns of the various neighborhoods and development areas involved; groups within those areas; and the public-at-large.

MDAD's Planning/Development Office in the past, and now the Airside Operations Division has and will sponsor and attend public information meetings on aircraft noise to inform community and civic organizations and government. MDAD has also reached the business community by hosting presentations for Chambers that comprise the Miami Coalition of Chambers of Commerce, area newspaper editors and television general managers on MIA's noise issues and expansion plans.

#### Noise Abatement Task Force

The Noise Abatement Task Force was formed through the assistance of Miami-Dade Commissioner Barbara Carey-Shuler to help the Aviation Department better assess community concerns regarding aircraft and airport related noise. This task force, which is comprised of Miami-Dade residents, airport users, public officials and Aviation Department officials, meets once a month to discuss aircraft and airport noise related issues and to task the Aviation Department with developing meaningful solutions to the problems that arise.



#### Noise Abatement Van

In an effort to continue to address the concerns of the Miami-Dade communities affected by aircraft related noise, the Noise Abatement Office has purchased a van which can be equipped with portable monitors. These monitors can be used at various locations throughout the County to record aircraft related noise levels. The van is also used to patrol Miami International for illegal aircraft engine run-ups.

#### "Fly Neighborly"

MDAD introduced the "Fly Neighborly" campaign in 1995 to inform aircraft operators, aircraft maintenance facilities and pilots that the surrounding residential areas of MIA have been designated as noise sensitive communities. Through this campaign, MDAD encourages its airport partners to comply with the noise abatement procedures established for MIA. This includes noise abatement posters in aircraft maintenance facilities, pilot lounges, employee bus shelters and aboard all employee

and industry airport shuttles. The posters draw attention to the needs of all employees at Miami International to be sensitive to the issue of aircraft noise and the community.



#### Noise Barrier NW 36th Street

The noise barrier constructed along NW 36th Street was designed to reduce, within residential areas north of NW 36th Street, aircraft noise level associated with aircraft ramp/ground activity. This includes noise from taxing aircraft, the start of take-off roll, and engine thrust reversals on landings. Since its construction, aircraft noise levels north of the wall have been reduced at least 10 decibels within 500 feet of the barrier. Benefits beyond 500 feet also are being experienced.

#### **IF YOU HAVE A CONCERN**



MDAD encourages public input and participation to ensure that both existing and proposed developments and procedures are acceptable to both aviation interests and the neighboring communities. If you have a concern about aircraft noise and would like to register a complaint,

contact the noise complaint line at **305-876-PLANE**. If you would like to request that MDAD officials attend an upcoming civic or homeowners association meeting to discuss aircraft noise related issues, contact the Noise Abatement Office at **305-876-0569**.



#### Alex Penelas Mayor

#### **BOARD OF COUNTY COMMISSIONERS**

Gwen Margolis, Chairperson

Betty T. Ferguson

District 1

Katy Sorenson District 8

Dorrin Rolle

District 2

District 9

Dr. Barbara Carey-Shuler District 3

Gwen Margolis

District 4

Bruno A. Barreiro, Jr. District 5

Pedro Reboredo District 6

Jimmy Morales District 7

Javier D. Souto District 10

Dennis C. Moss

Miguel Diaz de la Portilla District 11

Dr. Miriam Alonso District 12

Natacha Seijas Millan

District 13

Merrett R. Stierheim, County Manager Gary J. Dellapa, Aviation Director

Miami-Dade County provides equal access and equal opportunity in employment and services and does not discriminate on the basis of disability.



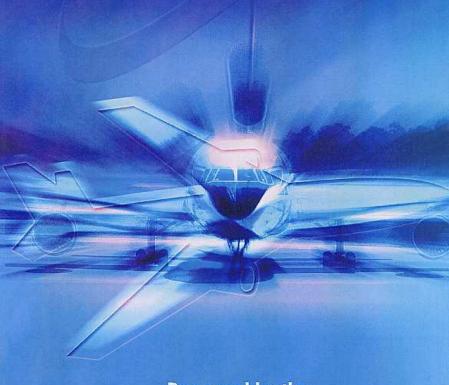




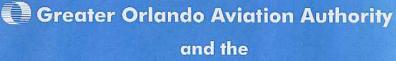
2442 Mississippi Avenue Tampa, FL 33629 Phone (813) 251-2401 Fax (813) 251-0831

		SAL	ES PROPOS	SAL	
URS Corporation  Attn: Roger Carvey  Email: roger_carvey@urscorp.com				Date: <b>Estimate:</b> # Phone:	4-12-05 <b>132307</b> 675-6567
		Captain's Fligl	ht – Noise Book	<b>elet</b> (option #4)	
Size:	8.5 x 11 folds	to 8.5 x 5.5.			
No. of Pages:	12 plus 4 pag	e cover.			
Ink Colors:	Both Cover &	text print 4cp/4	4cp. Can bleed o	or no bleed (no pri	ce difference)
Paper:		loss Text.  aper selection after sto	ock has been shipped f	rom supplier to printer n	nay be
Preparation:	URS to provide electronic file ready for output. Hillsboro to image digital dylux and Epson hi-res digitital color proof for customer approval prior to printing.				
Finishing:	Print, trim, fold and saddle-stitch to final size. See option below for 7 hole drilling.				
Packaging:	Carton pack conveniently.				
Shipping:	FOB Tampa. (includes local delivery)				
Schedule:	To be determ	ined			
Quantity:		<u>1,000</u>	<u>1,500</u>	<u>2,000</u>	
12 pg. plus co	ver price:	\$2,085	\$2,163	\$2,240	
For 7 Hole dri	illing add:	\$60	\$90	\$120	
which had been or differences. <b>Expir</b>	iginally described ration: This agreer	and quoted, the original shall become r	ginal quotation shall null and void if not a		
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This Purchase Ord Conditions on revo	-	ccordance with spec	cifications and sche	dules stated above and	d subject to Terms and
Purchaser:				Date	e:

### **Noise Brochure**



Prepared by the



**Aviation Noise Abatement Committee** 

### **Overview of Brochure**



This brochure is intended to provide aircraft noise information related to Orlando International Airport (OIA) and Orlando Executive Airport (OEA). This brochure summarizes noise exposure information for those located within aircraft arrival and departure corridors or for those individuals who are considering locating in the vicinity of these airports. Specifically the brochure includes:



- An overview of aircraft noise exposure
- A summary of the noise abatement programs established at both airports
- A discussion of the role of the Aviation Noise Abatement Committee (ANAC) in the review of noise issues
- A description of the roles and responsibilities of those implementing the noise abatement measures
- A summary of the Noise and Operations Monitoring System (NOMS) and Noise Abatement Office (NAO)

# Aircraft Noise Exposure

Aircraft noise exposure can extend miles beyond the limits of an airport. Most noise impacts occur when aircraft are on their final approach to or initial departure paths from the airport. Since there is a wide range of sensitivity to noise, the perceived extent of noise annoyance for an individual is largely dependent on his or her personal reaction to it. The noise heard at any given point on the ground can also vary widely due to a number of factors:

- Generally, older jet aircraft are louder than newer ones. New aircraft noise exposure standards must be met by the fall of 2003
- Generally, departing aircraft are louder than arriving aircraft
- Aircraft departing for distant destinations are louder than those traveling to closer destinations (aircraft with greater fuel load cannot climb as rapidly)
- An aircraft arriving or departing at night is generally perceived to be louder than the same aircraft arriving or departing during the day (a person's sensitivity to noise is greater during sleeping hours)

Weather conditions can also affect the noise level of aircraft:

- Low cloud cover may increase the noise level by reflecting back to the ground
- Pilots may be directed to avoid thunderstorm activity by flying outside normal arrival and departure routes
- Very low cloud cover may require aircraft to use an instrument landing resulting in longer approaches



Thunderstorm activity

Noise exposure can also change as a result of the construction of new runways and runway extensions. A fourth runway is under construction at OIA. This will result in new areas being affected by aircraft flyover activity.



Fourth runway layout

Although operations at OIA and OEA have increased, noise exposure

has been reduced in many areas around these facilities. This is a result of:

- Quieter aircraft technology developed by the industry
- Mandatory requirements by the Federal government to phase out noisier aircraft
- The implementation of noise abatement procedures

### **About the Airports**

OIA and OEA, which are public airports and part of the National Airspace System (NAS) are owned by the City of Orlando and operated by the Greater Orlando Aviation Authority (GOAA). GOAA consists of a seven member board. Five members are



Orlando International Airport

appointed by the governor of the State of Florida, one member is selected from the Orlando City Council and one member is selected from the Orange County Commission. The Authority provides direction to its executive director and staff which operate the day-to-day activities of the airports.

OIA is located southeast of Orlando. One of the 15th busiest airports in the United States, OIA provides service to and from cities throughout the U.S. and the world. With increased tourism, business and industry in the greater



Orlando Executive Airport

Orlando area, OIA has grown to keep pace with demands for passenger and air cargo service. Economic analyses indicates that OIA supports approximately 60,000 direct and indirect jobs. Direct and indirect impact on the local economy is approximately \$14 billion per year. Growth is forecast at 20,000 OIA in the years ahead and GOAA is expanding the facility to meet those demands.



Major areas of expansion currently underway at OIA include a fourth runway to be located approximately 4,300 feet east of and parallel to the existing easternmost runway and the addition of aircraft gates, terminal facilities and support facilities within the existing property boundaries of OIA.

OEA is a major General Aviation (GA) facility located east of downtown Orlando and is designated as a reliever facility for OIA. This allows OIA to focus on providing air carrier service while OEA accommodates general aviation, ambulance services, police helicopters, and extensive business aviation needs. Increases in general aviation aircraft activity are projected for OEA and the Authority is expanding and modernizing facilities to meet these needs. In addition, major terminal expansion has recently been completed by OEA's fixed base operators (FBOs).



Sheriff helicopters at OEA



**GA** activity at **OEA** 

# Noise Abatement Program Summary

Noise Abatement Programs have been established at OIA and OEA. These programs include noise exposure reductions through establishment of:

- Operational procedures
- Federal legislation
- Compatible land use plans

Most of these airport operating procedures were established and have been in effect since the late 1970's and early 1980's. Occasionally, minor modifications to these procedures occur when they are shown to reduce noise exposure to the overall community. Changes to operational procedures will result whenever a new runway is placed into operation. OIA plans to open a fourth runway in late 2003. Environmental and noise studies have been completed which establish the basis for its operation.

Federal legislation mandated air carrier/air cargo and aircraft manufacturers to stricter noise standards. Aircraft operators must comply with this legislation by the end of 2003. Existing aircraft which do not meet the new standards must be replaced or retrofitted (aircraft weighing over 75,000 lbs.). The resulting noise reduction would benefit communities affected by these aircraft serving OIA.

GOAA has acquired property in high noise exposure areas to improve the compatibility between off-airport land use and aircraft overflight activity. Local governments have enacted ordinances that require future development to be compatible with aircraft noise exposure. In addition, certain areas around OIA and OEA are subject to avigation easements, waiver of claim, and/or notice of aircraft activity. These represent forms of notification that overflights occur today or will occur in the future as a result of growth in aircraft activity and planned runway development. It should be noted that there are off-airport areas affected by aircraft operations that do not include a site specific notification. Information concerning aircraft activity and noise exposure at specific sites can be obtained by contacting the Noise Abatement Officer 407.825.2674

# Primary Aircraft Overflight Areas

The four exhibits shown on the following pages represent the primary final arrival corridors and initial departure corridors for aircraft operating at OIA and OEA. These corridors represent where the majority of aircraft overflights occur, however, some aircraft overflights will occur outside of these flight tracks. The arrows shaded in blue are the primary arrival corridors. Arrows shaded in green are the primary departure corridors. The size of the arrows on all exhibits indicates the relative arrival and departure activity. The larger the arrows, the greater the number of aircraft operations.

Exhibit 1 depicts aircraft flow to the south at OIA. This represents the primary flow of aircraft at the airport, occurring about 85 percent of the time. Exhibit 2 depicts northerly flow at OIA. This represents the primary areas of overflights the remaining 15 percent of the time. It should be noted that a fourth runway on the east side of the airport is under construction. The flight corridors presented on Exhibits 1 and 2 include the primary locations of arrivals and departures

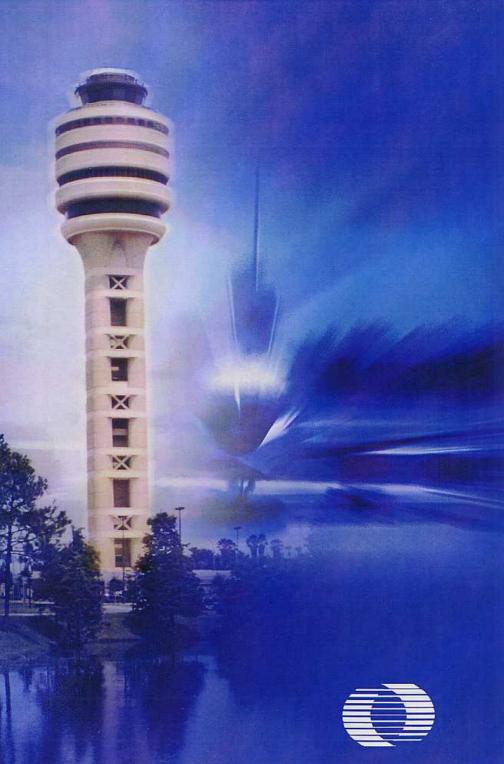
operating to and from this new runway.

Exhibit 3 depicts the primary flight corridors for west flow at OEA. Exhibit 4 depicts the primary flight corridors for east flow at OEA. West flow at OEA occurs approximately 40 percent of



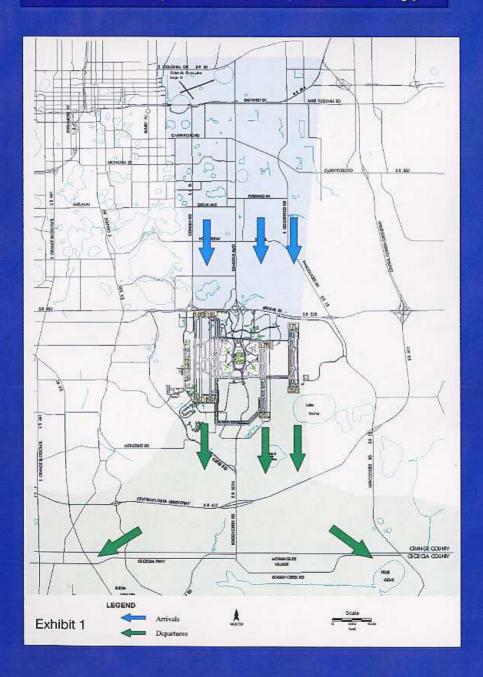
Air Traffic Control Tower Orlando Executive Airport

the time. East flow occurs about 60 percent of the time. The noisiest locations for OIA and OEA are generally the closest to the airports and toward the center of the corridors.



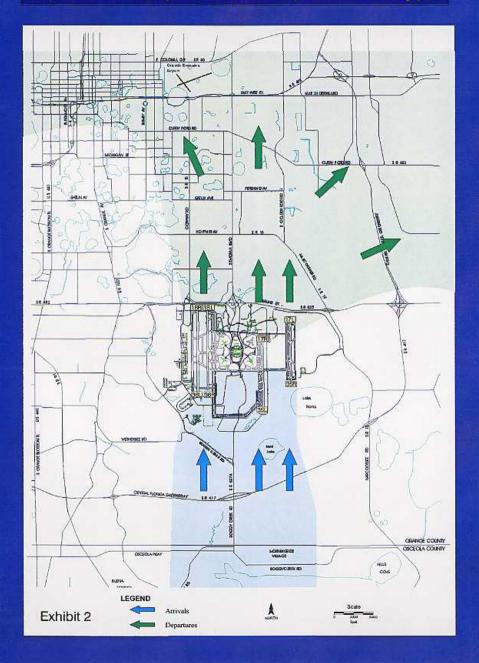
#### ORLANDO INTERNATIONAL AIRPORT

South Flow(85% of time, seasonally)



#### ORLANDO INTERNATIONAL AIRPORT

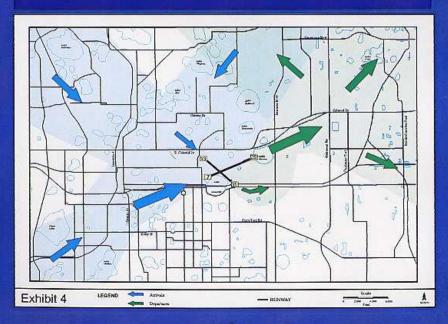
North Flow(15% of time, seasonally)



### ORLANDO EXECUTIVE AIRPORT West Flow(40% of time, seasonally)



# ORLANDO EXECUTIVE AIRPORT East Flow(60% of time, seasonally)



# Aviation Noise Abatement Committee

The Aviation Noise Abatement Committee (ANAC) is a volunteer citizen committee organized in 1978 to find ways of reducing the impact of aircraft noise in the community. The Committee reviews noise complaints and recommends changes in aircraft operational procedures or land use controls to reduce aircraft noise ground OIA and OEA.



**Aviation Noise Abatement Committee** 

ANAC is comprised of 10 voting members, 7 are local citizens selected by their governments to represent various communities or interests in the area. The Greater Orlando Aviation Authority (GOAA) selects 3 members; one is a citizen from the community at large, one is a member of the GOAA staff and one is a representative from Orlando Executive Airport.

ANAC is technically supported in an advisory capacity by the Authority's Noise Abatement Officer, the Federal Aviation Administration's Orlando Air Traffic Control Tower personnel, land planners from local jurisdictions, and noise/land use consultants.

ANAC meetings are advertised and held monthly. Public attendance and input is encouraged. Meeting dates can be confirmed by calling the Noise Abatement Officer at 407.825.2674.

For current listing of ANAC members and the communities they represent, contact the Noise Abatement Officer at 407.825.2674 or reference our web page, <a href="https://www.orlandoairports.net/goaa/noise">www.orlandoairports.net/goaa/noise</a>

# Noise Abatement Implementation Responsibilities

Effective implementation of a noise abatement program requires the cooperation and coordination of numerous participants, each having unique responsibilities. For OIA and OEA, these participants include:

#### ANAC

which is responsible for reviewing community input and recommending noise control measures to the Aviation Authority.



# **Federal Goverment**



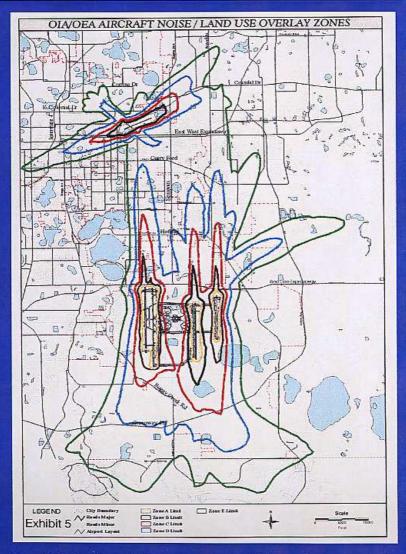
which has the authority and is responsible for controlling aircraft noise by regulating source emissions. The FAA's Air Traffic Control has the authority to implement noise abatement operational procedures which have been recommended by the airport proprietor and have been shown to be consistent with air safety and all legal requirements.



# **Greater Orlando Aviation Authority**

which is responsible for planning and implementing actions designed to reduce the effect of noise on residents of the surrounding area. Such actions include noise abatement procedures, land acquisition and other controls that do not discriminate, create an unsafe situation, impede the management of the air navigation system, or interfere with interstate or foreign commerce. (See Exhibit 5)

#### AIRCRAFT NOISE/LAND USE OVERLAY ZONES MAP



The City of Orlando and Orange County, FL have both adopted ordinances amending previously existing ordinances relating to aircraft noise. Section 58.383 of the Code of the City of Orlando and Section 6 of Orange County Ordinance Number 2000-07 require public notice of the existence of Aircraft Noise/Land Use Overlay Zones Map.

# Local Goverment and Planning Agencies

which have the responsibility for land use planning, zoning and housing regulations, review proposed developments to ensure compatibility with airport operations. Contact the Planning Department at the following agencies for information on land-use ordinances:

**City of Orlando** 

**Orange County** 

City of Belle Isle

Osceola County

East Central Florida Regional Planning Council

# Air Carriers, Charter and Cargo Operators



are mandated by the FAA to retire or retrofit older, noisier aircraft to meet more stringent noise (Stage III) standards by 2003. Pilots associated with these entities, and general aviation pilots, have the responsibility to fly aircraft in ways that minimize the impact of noise on people.

# **Air Travelers and Shippers**

generally bear the cost of noise reduction measures through the payment of various waybill and passenger facility fees.



Surcharge on airline tickets

# Noise and Operations Monitoring System

The Authority operates a Noise and Operations Monitoring System (NOMS) that provides noise and flight tracking information for OIA and OEA. The system consists of a series of permanent and portable noise monitoring stations used to collect noise exposure data. In addition, the NOMS records flight track information and aircraft altitudes. Data collected from the system is transmitted to a central computer located in the Authority offices. Data is



Noise monitor equipment near OIA

stored and used to evaluate noise complaints, document runway use and flight corridors, assist in the development of noise mitigation measures, identify trends in noise exposure and provide support for the development of noise contours. Specific data related to noise monitoring is available for review at the Noise Abatement Office.

#### **Noise Abatement Officer**

The Authority has a full-time noise abatement officer on staff. This individual is responsible for operating the NOMS system, supporting ANAC, assisting in the implementation of noise abatement measures, talking with citizens who have questions or complaints regarding aircraft noise and maintaining the latest information related to aircraft noise around OIA and OEA.

# **Your Input**

is very important. The Aviation Authority's Noise Abatement Officer and ANAC actively seek a continuous dialog with community representatives and individuals regarding aircraft noise exposure. If you have questions regarding aircraft noise issues, attend the next ANAC meeting or call the Authority's Noise Abatement Officer. ANAC meetings are normally held on the second Friday of each month but dates can vary. To verify the next meeting date or to speak with the Aviation Authority's Noise Abatement Officer, please contact the:

Noise Abatement Office Greater Orlando Aviation Authority Orlando International Airport One Airport Boulevard Orlando FL 32827-4399 (407) 825-2674

Noise Hotline: (407) 825-2003 Toll Free: (866) 646-6473

(866) OI-NOISE

Visit our Web Site at: http://www.orlandoairports.net/goaa/noise